EM CASE OF THE WEEK.

BROWARD HEALTH MEDICAL CENTER DEPARTMENT OF EMERGENCY MEDICINE



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Running a Code

A 52-year-old male with no past medical history presents to the ED with left sided chest pain that radiates to the shoulder persisting for the last 4 hours. He has never experienced these symptoms prior to this episode. He denies weakness, fever or recent travel. Patient is afebrile but diaphoretic and pale On physical exam patient appears distressed and tachycardic and suddenly the monitor changes to ventricular fibrillation. Patient becomes unresponsive. Which of the following is the most appropriate initial treatment for this patient's condition?

- A. Give CPR
- **B.** Check for Pulse
- C. Electrical Cardioversion
- D. Push Adenosine
- E. Give an ampule of D50



http://www.naturalhealth365.com/tag/heartattack/

Know the five. Stay alive.

- 1. PRESSURE or squeezing in the center of the chest
- 2. SHOOTING PAIN that spreads to shoulders, arms, neck or jaw
- 3. NAUSEA, dizziness, fainting or sudden abnormal sweating
- 4. SHORTNESS of BREATH
- 5. HEARTBURN or INDIGESTION-like pain

Women may also experience abdominal pain and weakness.



Ventricular Fibrillation

Cardiac muscle of the heart is contracting uncoordinatedly in the ventricles thus resulting in poor cardiac output

EM Case of the Week is a weekly "pop quiz" for ED staff.

The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.

BROWARD HEALTH MEDICAL CENTER

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The correct answer is B. Check for a pulse.

Discussion

The first step in initiating a code is actually calling for help while beginning the protocol for code blue. Calling out loudly for help is the initial request for assistance, and locally responding assistants are designated to formally call the code blue through the facility-wide response system. While awaiting members of the hospital-wide code team to arrive, a nurse should initiate CPR and other interventions. Members of the code team should identify themselves and their role upon entering the room with statements such as "I'll take the airway" or "I'll document."

Despite the fact that healthcare professionals with advanced education and training know the pathophysiology behind cardiopulmonary arrest, in the heat of the moment they often forget that the most important first step is restoring perfusion through effective chest compressions.

It is important to know the expected roles and responsibilities during a code blue.

Initial Steps in Code Blue

- * Initiate the code blue per facility policy.
- * Start CPR (one- and two-person rescuer).
- * Position the bag-mask device and attach it to oxygen.
- * Place the backboard.
- * Attach ECG leads.
- * Attach defibrillation pads.
- * Charge the defibrillator and defibrillate.
- * Administer medications.
- * Set up equipment for intubation
- * Assume various roles.
- * Coordinate the code.



Compressor: The first healthcare provider to respond assumes the role of "compressor" and immediately begins chest compressions at a rate of at least 100 compressions per minute

Airway manager: While the first responder begins compressions, a second responder manages the airway.

Defibrillator manager: In addition to compressions, the only other therapy proven to increase survival is defibrillation. Rapid defibrillation for "shockable rhythms," which are pulseless ventricular tachycardia and ventricular fibrillation.

Crash cart manager: The crash cart manager should be positioned on the same side as the patient's venous access and have room to open the crash cart drawers for easy access to the contents.

Code team leader: The code team leader directs resuscitation efforts, communicates with all team members, and monitors the patient's cardiac rhythm.

The recorder: The recorder documents the entire resuscitation process.

For a list of educational lectures, grand rounds, workshops, and didactics please visit **BrowardER.com** and **click** on the **"Conference" link**.

All are welcome to attend!



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Running a Code Blue Medical Emergency Identified Code Blue/Code White 1st nurse that arrives to scene: Identifies Code Yellow Code Yellow Unresponsive · Not breathing or abnormal breathing (only gasping) Stops infusion (noncardiopulmonary arrest) · Runs normal saline wide open · And/or no pulse For example, hypersensitivity to Obtains vital signs chemotherapy or biotherapy Administers oxygen as needed Healthcare provider delegates staff to: · Overhead page initial response team. Healthcare provider delegates staff to 1. Doctor overhead page initial response team: 2. Pharmacist 1. Doctor 3. Charge nurse 2. Pharmacist · Unit clerk notifies lobby receptionist. 3. Charge nurse Healthcare provider: Definite If patient's health status changes to unre-· Gives one breath evpulse Check pulse: Definite sponsive or condition worsens ery six seconds pulse within 10 seconds? Rechecks pulse every two minutes Healthcare provider delegates staff to: pulse · Notify EMS. Healthcare provider begins cycles of 30 compressions and 2 breaths. · Unit clerk notifies lobby receptionist. Healthcare provider arrives with AED or defibrillator and code cart and places AED pads on patient. Role Delineation AED checks rhythm and identifies shockable rhythm. Doctor: Prescribes intervention (i.e., medications) Medical health technician: Runner Shockable Not shockable Pharmacist: Prepares all medications Primary nurse: Delegates initial response teams orders · Give one shock. . Resume CPR immediately for Nurses: · Resume CPR immedi- 1-2: Manage airway/breathing two minutes. · 1: IV line and give medications as order ately for two minutes. · Check rhythm every two minutes. . Continue until EMS takes over or . 1: Code cart and documentation . 1-2: AED and chest compression victim starts to move.

FIGURE 1. Medical Emergency Algorithm: Step-by-Step Approach to Handle Emergencies in Outpatient Area Note. Figure courtesy of Rutgers Cancer Institute of New Jersey. Used with permission.

AED-automated external defibrillator; CPR-cardiopulmonary resuscitation; EMS-emergency medical services

https://cjon.ons.org/cjon/18/1/cardiopulmonary-arrest-outpatient-setting/html/ScaramuzzoF1.jpg

Summary of what to do and who is to do it.

Take Home Points

- Despite advances in the treatment of heart disease, the outcome of patients experiencing sudden cardiac arrest (SCA) remains poor. The reasons for the continued poor outcomes are likely multifactorial
- When SCA is due to a ventricular tachyarrhythmia, the outcome of resuscitation is better compared with those with asystole or pulseless electrical activity.
- Among the many factors that appear to have an influence on the outcome of SCA, the elapsed time prior to effective resuscitation (ie, establishment of an effective pulse) appears to be the most critical element.



ABOUT THE AUTHOR

This month's case was written by Christopher Brown. Chris Brown is a 4th year medical student from FIU HWCOM. He did his emergency medicine rotation at BHMC in March 2017. Chris Brown is pursuing a career in general surgery at LSU-NOLA.

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